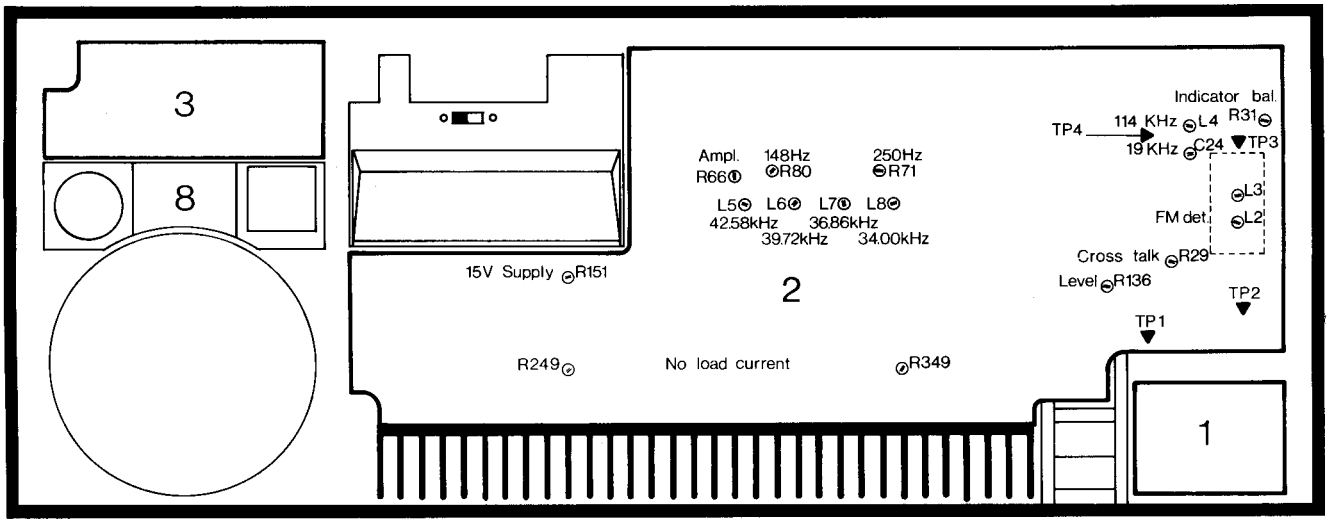
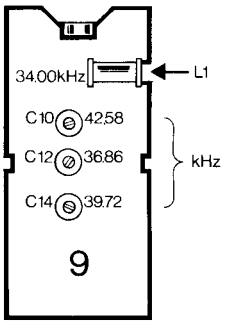
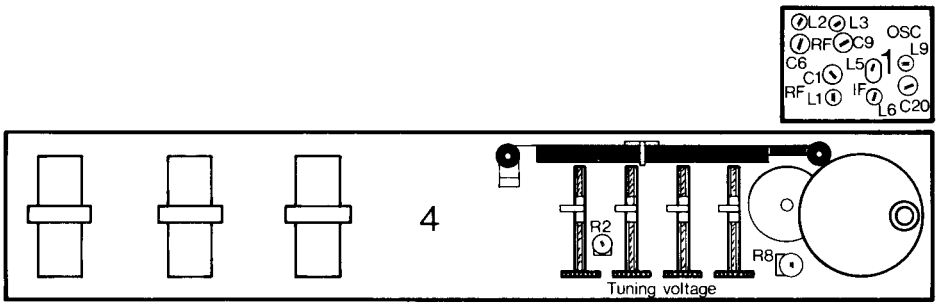
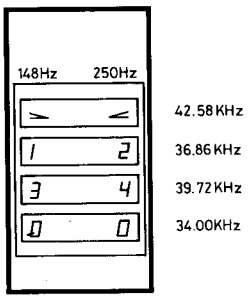
Bang & Olufsen









RETTELSER
CORRECTIONS
BERICHTIGUNG

B	CORR.MADE IN DIAG.	BEFORE CORRECTION	AFTER CORRECTION
PC3	1		New volume control
9C3	2	1nF	Removed
9C7	2	1nF	Removed
9R11	2	1.5 kohms	2.2 kohms
2R230/330	2	1.2 kohms	1 kohm
2R143	2	3.9 kohms	2.2 kohms
2R233/333	2	10 kohms	18 kohms
2R236/336	2	680	560
2R246a/346a	2		Added
2C224/324	2	10nF	47nF
PC4	1 and 2	8002283	8002342
PC5	1	8002288	8002344
2TR15-22	1	8320132	8320416
OD1	2	Wrong no. in diode list	8300275

Bang & Olufsen

MÅLEBETINGELSER FOR DIAGRAM:

Alle DC spændinger er målt i forhold til stel med voltmeter (indre modstand 11 MOhm).

DC spændinger *uden* parentes er målt med modtageren i stilling FM 5 og antennesignal på 500 μV (1 mV EMK) med pilottone.
Volume i stilling MEDIUM og højttalere *ikke* tilsluttet.

DC spændinger *i* parentes på 2IC9 er målt, når et af betjeningsfelterne aktiveres.
DC spændinger *i* parentes på 2TR30, 2TR31 og 2TR32 er målt i stilling STAND BY.

FM signalniveauer er målt ved Δ f 40 kHz, f mod. 1 kHz og antennesignal på 500 μV (1 mV EMK).

LF følsomheder er målt ved 30 W output. Balance, bas, diskant på 0, volume på max. Udgang belastet med 4 Ohm, input 1 kHz.

Signal vej er vist i stilling FM og kun for venstre kanal.
For fjernbetjeningsmodtageren er signalvejen vist med FM 1 aktiveret på control module.

CONDITIONS FOR MEASUREMENT FOR DIAGRAM:

All DC voltages are measured in proportion to chassis with voltmeter (inner resistance 11 M Ohm).

DC voltages *without* brackets are measured with the receiver in position FM 5 and aerial signal 500 μV (1 mV EMK) with pilot signal.
Volume in position MEDIUM and speakers *not* connected.

DC voltages *with* brackets on 2IC9 are measured when one of the operating fields is activated. DC voltages *with* brackets on 2TR30, 2TR31 and 2TR32 are measured in position STAND BY.

FM signal levels are measured at Δf 40 kHz, f. mod. 1 kHz and aerial signal 500 μV, (1 mV EMK).

LF sensitivities are measured at 30 W output. Balance, bass, treble on 0, volume on max. Output loaded with 4 Ohm, input 1 kHz.

Signal path is shown in position FM and only for left channel.
Signal path in remote control receiver is shown with FM 1 activated on control module.

MESSBEDINGUNGEN FÜR SCHALTBILD:

Alle DC Spannungen sind im Verhältnis zu Chassis mit Voltmeter (innerer Widerstand 11 M Ohm).gemessen.

DC Spannungen *ohne* Klammern sind mit dem Empfänger in Stellung FM 5 und Antennensignal von 500 μV (1 mV EMK) mit Pilotton gemessen.
Volume in Position MEDIUM und Lautsprecher *nicht* angeschlossen.

DC Spannungen *in* Klammern auf 2IC9 sind gemessen, wenn eines der Bedienungsfelder aktiviert wird.
DC Spannungen *in* Klammern auf 2TR30, 2TR31 und 2TR32 sind in Position STAND BY gemessen.

FM Signalniveaus sind bei Δf 40 kHz, f. mod. 1 kHz und Antennensignal von 500 μV (1 mV EMK) gemessen.

LF Empfindlichkeiten sind bei 30 W Output gemessen. Balance, Tiefton, Diskant auf 0, Volume auf max. Ausgang mit 4 Ohm belastet, Eingang 1 kHz.

Der Signalweg ist in Stellung FM und nur für linken Kanal gezeigt.
Der Signalweg ist für den Fernbedienungsempfänger gezeigt mit FM 1 auf Control Module betägtigt.

JUSTERING AF TOMGANGSSTRØM:

Tomgangsstrømmen justeres medens modtageren er kold og med neddrejet volume kontrol. *Højttalere må ikke være tilsluttet.*

Med 2R249 (2R349) justeres til 25 mA i kollektoren af 2IC200 (2IC300) eller – 12 mV over 2R256 (2R356).

Når modtageren har været tændt 10 minutter, med neddrejet volume kontrol, kontrolleres tomgangsstrømmen og justeres igen til 25 mA eller 12 mV over emittermodstanden.

ADJUSTMENT OF NO–SIGNAL CURRENT:

The no-signal current has to be adjusted while the receiver is cold and with the volume control turned down. *The loudspeakers must not be connected.*

With 2R249 (2R349) adjust for 25 mA collector current of 2IC200 (2IC300) or – 12 mV across 2R256 (2R356).

When the receiver has been switched on for 10 minutes, with the volume control turned down, the no-signal current is checked and readjusted for 25 mA or 12 mV across the emitter resistor.

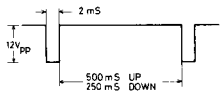
FEINEINSTELLUNG DES LEERLAUFSTROMS:

Der Leerlaufstrom wird feineingestellt, während der Empfänger kalt ist, und bei herabgedrehtem Lautstärkeregler. *Lautsprecher dürfen nicht angeschlossen sein.*

Mit 2R249 (2R349) auf 25 mA im Kollektor von 2IC200 (2IC300) oder 12 mV über 2R256 (2R356) justieren.

Wenn der Empfänger 10 Minuten mit herabgedrehtem Lautstärkeregler angeschlossen gewesen ist, wird der Leerlaufstrom kontrolliert und wieder auf 25 mA oder 12 mV über dem Emitterwiderstand justiert.

TESTPUNKTER/TESTPOINTS/ TESTPUNKTE

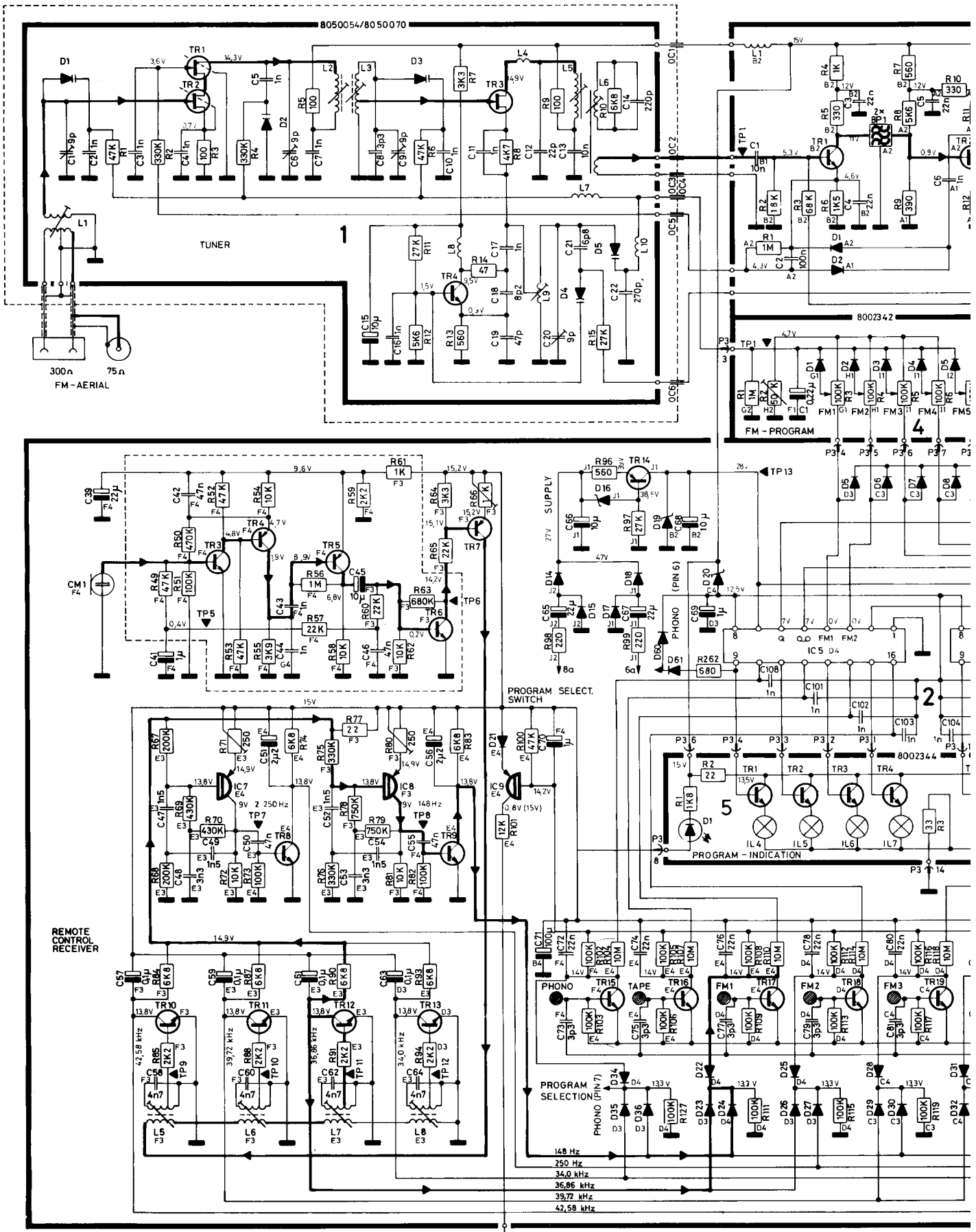
2TP2	IF signal
2TP3	FM detector adjustment
2TP4	Osc. adjustment (2C24) 3 V_{pp} square-wave 19 kHz
2TP7	Mod. freq. adj. 250 Hz
2TP8	Mod. freq. adj. 148 Hz
2TP9	Carrier freq. adj. 42.58 kHz
2TP10	Carrier freq. adj. 39.72 kHz
2TP11	Carrier freq. adj. 36.86 kHz
2TP12	Carrier freq. adj. 34.00 kHz
2TP13	27 V ± 1,5 V
2TP14	–11,5 V ± 1,5 V
2TP15	15 V ± 0,1 V
2TP16	15,5 V ± 0,3 V
2TP17	15 V in STAND BY. 0 V on program.
2TP202	12 mV
2TP302	12 mV
2TP203	0 V ± 200 mV
2TP303	0 V ± 200 mV
3TP1	12 V_{pp} 
3TP2	3,2 V eff. (RMS), 9 V_{pp} approx. 100 kHz
3TP3	7,9 V, volume in MEDIUM
4TP1	Tuning voltage

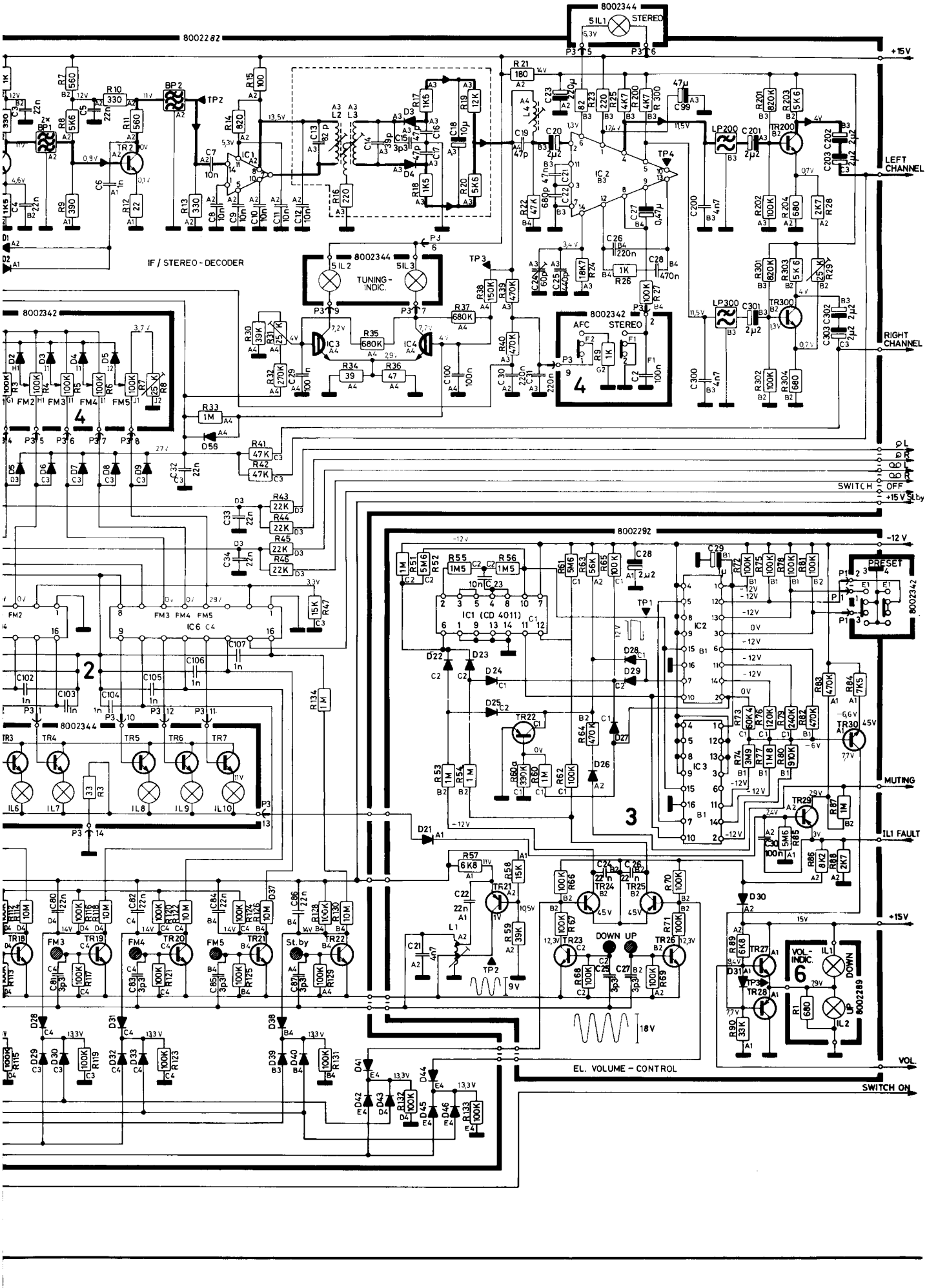
FM SIGNALNIVEAUER/FM SIGNAL LEVELS/UKW SIGNALNIVEAUS

2TP1	9 mV
2TP2	100 mV
2TP3	180 mV, 1 kHz

FØLSOMHEDER/ SENSITIVITIES/ EMPFINDLICHKEITEN

2TP200	150 mV
2TP300	150 mV
2TP201	160 mV
2TP301	160 mV
PHONO	3 mV
TAPE	220 mV


8050054/8050070
TUNER
FM-AERIAL
300Ω
75Ω
8002342
FM - PROGRAM
SUPPLY
PHONO (PIN 6)
IC 5 D4
PROGRAM SELECT. SWITCH
PROGRAM - INDICATION
8002344
REMOTE CONTROL RECEIVER
PHONO
TAPE
FM1
FM2
FM3
PROGRAM SELECTION
PHONO (PIN 7)
148 Hz
250 Hz
34,0 kHz
36,86 kHz
39,72 kHz
42,58 kHz

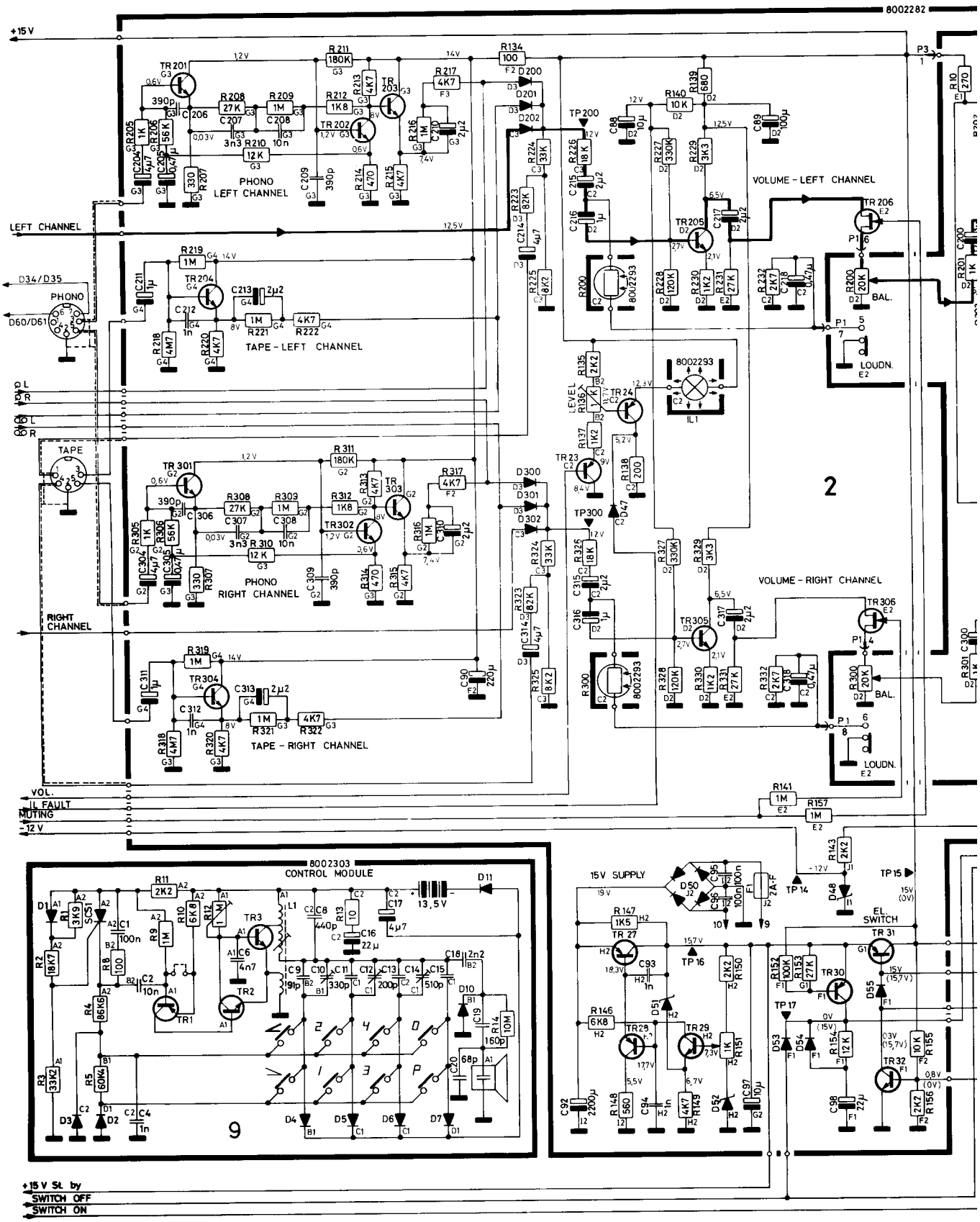

8002282
8002344
5 IL1
STEREO
+15V
LEFT CHANNEL
RIGHT CHANNEL
IF / STEREO - DECODER
TUNING - INDIC.
8002342
AFC
STEREO
SWITCH OFF
+15 V stby
8002292
-12 V
PRESET
IC1 (CD 4011)
IC2
IC3
IC4
IC6 C4
MUTING
IL1 FAULT
+15V
VOL.
SWITCH ON
EL. VOLUME - CONTROL
VOL. - INDIC.
DOWN
UP
8002289
FM2
FM3
FM4
FM5
St. by

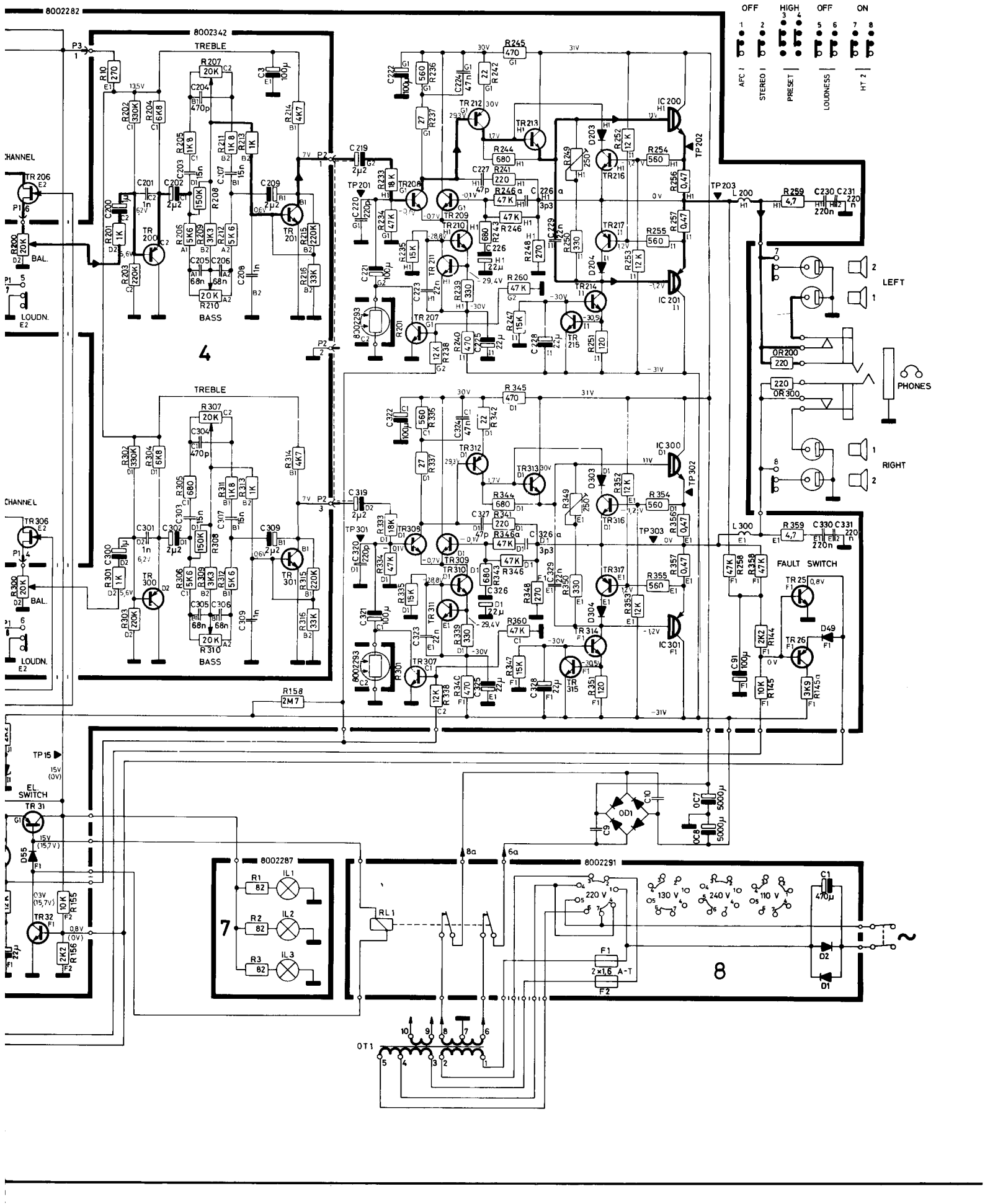
DIODE LIST

OD1	8300275	B 80 C 5000
1D1	8300050	BB 103 blue
1D2-1D3	8300041	BB 103 green
1D4	8300032	BA 138
1D5	8300050	BB 103 blue
2D1-2D2	8300131	1N 4148
2D3-2D4	8300142	AA 143
2D5-2D9	8300131	1N 4148
2D14-2D15	8300023	1N 4002
2D16	8300128	ZPD 5.6V 5%
		BZX 79 5.6V
2D17-2D18	8300023	1N 4002
2D19	8340105	ZTK 27 ass.
2D20	8300222	ZPD 2.7V 5%
		BZX 83 2.7V

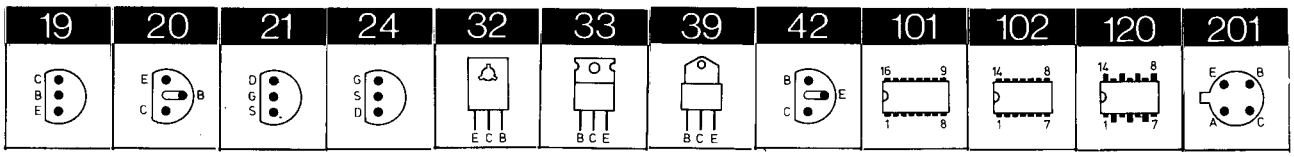
2D21-2D47	8300131	1N 4148
2D48	8300029	ZPD 12V 5%
		BZX 79 12V
2D49	8300131	1N 4148
2D50	8300277	VS 048
		KB PC 1005
		VH 048
2D51	8300028	ZPD 9.1V 5%
		BZX 79 9.1V
		BZX 83 9.1V
2D52	8300128	ZPD 5.6V 5%
		BZX 79 5.6V
2D53-2D54	8300131	1N 4148
2D55	8300023	1N 4002
2D56	8300131	1N 4148
2D60		
2D61		
2D200/300 - 2D204/304		

3D21-3D29	8300058	SFD 184
		1N 4148
		1N 4148
3D30	8300222	ZPD 2.7V 5%
		BZX 83 2.7V
3D31	8300058	SFD 184
		1N 4148
		1N 4148
4D1- 4D5	8300131	1N 4148
5D1	8300195	TIL 209A
8D1-8D2	8300023	1N 4002
9D1	8300058	1N 4148
		SFD 184
9D2	8300131	1N 4148
9D3	8300058	1N 4148
		SFD 184
9D4-9D10	8300102	1N 4004
9D11	8300131	1N 4148


8002282
+15 V
PHONO LEFT CHANNEL
TAPE - LEFT CHANNEL
VOLUME - LEFT CHANNEL
LEFT CHANNEL
D34/D35
PHONO
D60/D61
TAPE
PHONO RIGHT CHANNEL
TAPE - RIGHT CHANNEL
VOLUME - RIGHT CHANNEL
RIGHT CHANNEL
BAL.
LOUDN.
LEVEL
8002293
8002293
2
VOL.
IL FAULT
MUTING
-12 V
8002303
CONTROL MODULE
9
15 V SUPPLY
EL. SWITCH
+15 V St by
SWITCH OFF
SWITCH ON


8002282
8002342
TREBLE
BASS
CHANNEL
LOUDN.
BAL.
LEFT
RIGHT
PHONES
FAULT SWITCH
EL. SWITCH
OFF
HIGH
OFF
ON
AFC I
STEREO I
PRESET
LOUDNESS
HT 2
8002293
8002287
8002291
220 V
130 V
240 V
110 V
2 x 1,6 A-T

Bang & Olufsen



TRANSISTOR AND IC LIST

1TR1	8320119	**21** TIS 88A
1TR2		
1TR3	8320136	**21** 3C2
		21 TIS 88
		21 SPF 2060
1TR4	8320112	**42** BF 255
		42 BF 495
2TR1	8320311	**42** BF 240
2TR2		
2TR3	8320095	**20** BC 549 B
2TR4	8320069	**20** BC 559 B
2TR5	8320104	**20** BC 558 B
2TR6	8320132	**20** BC 548 B
		20 BC 183 B
2TR7	8320161	**20** BC 212 B
		20 BC 251 B
2TR8 -	8320132	**20** BC 548 B
2TR13		**20** BC 183 B
2TR14	8320316	**20** BC 327
2TR15 -	8320416	**20** BC 548 B
2TR22		
2TR23	8320104	**20** BC 558 B
2TR24	8320316	**20** BC 327 B
2TR25	8320132	**20** BC 548 B
		20 BC183 B
2TR26	8320161	**20** BC 212 B
		20 BC 251 B
2TR27	8320257	**33** TIP 32 A
2TR28	8320316	**20** BC 327
2TR29	8320132	**20** BC 548 B
		20 BC 183 B
2TR30	8320104	**20** BC 558 B
2TR31	8320240	**32** BD 136
		32 BD 136 W
2TR32	8320132	**20** BC 548 B
		20 BC 183 B
2TR200/300	8320095	**20** BC 549 B
2TR201/301		
2TR202/302		
2TR203/303	8320132	**20** BC 548 B
		20 BC 183 B
2TR204/304	8320221	**20** BC 549 C
2TR205/305		
2TR206/306	8320345	**24** MPF 111
2TR207/307	8320132	**20** BC 548 B
		20 BC 183 B
2TR208/308	8320377	**20** BC 547 C
2TR209/309		
2TR210/310	8320092	**20** BC 182 B
		20 BC 547 B
2TR211/311	8320132	**20** BC 548 B
		20 BC 183 B
2TR212/312	8320365	**19** MPS H54
2TR213/313	8320321	**19** MPS A06
2TR214/314		
2TR215/315	8320132	**20** BC 548 B
2TR216/316		**20** BC 183 B
2TR217/317	8320104	**20** BC 558 B
2IC1	8340071	**120** MC 1355 PQ
2IC2	8340032	**102** CA 1310 QE
		17893
		LM 1310 N
2IC3	8340028	**19** MPS A13
2IC4		**19** SPS 5418
		19 TPS A13
2IC5	8340055	**101** SAS 570 S
2IC6		
2IC7	8340025	**20** BC 516
2IC8		**19** MPS A65
2IC9		**19** SPS 5431
2IC200/300	8340042	**39** TIP 141
2IC201/301	8340041	**39** TIP 146
3TR21	8320104	**20** BC 558 B
3TR22		
3TR23	8320416	**20** BC 548 B
3TR24	8320152	**20** BC 557 B
3TR25		
3TR26	8320416	**20** BC 548 B
3TR27	8320221	**20** BC 549 C
3TR28	8320104	**20** BC 558 B
3TR29		
3TR30	8320377	**20** BC 547 C
3IC 1	8340109	**102** CD 4011
		CN
		102 CD 4011
		102 MC 14011
		BCP
3IC2	8340070	**101** MC 14516
		BCP
3IC3		**101** CD 4516
		101 CD 4516
		BCN
4TR200/300	8320069	**20** BC 559 B
4TR201/301	8320095	**20** BC 549 B
5TR1 -	8320108	**20** BC 548 B
5TR7		
9TR1	8320104	**20** BC 558 B
9TR2	8320108	**20** BC 548 B
9TR3	8320097	**20** BC 547 B
9SCS1	8300219	**201** BR 101